

Promoting Clear Identification of Sepsis, Severe Sepsis & Septic Shock

ICD-9-CM Coordination and
Maintenance Committee Meeting

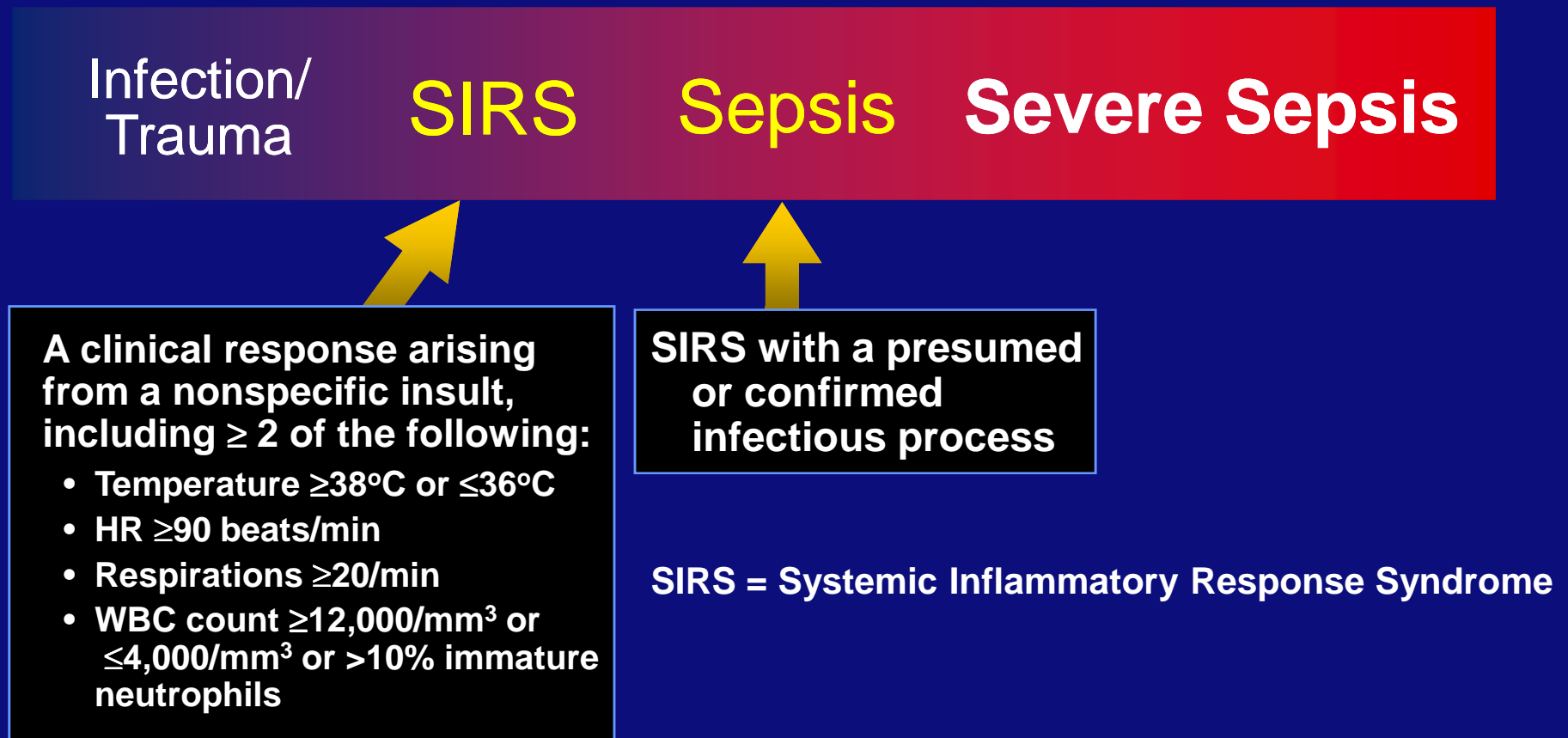
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Overview

- Differentiation between Septic Shock in relation to other conditions in current code, Sepsis, and Severe Sepsis
- Disease Epidemiology, Incidence and Mortality
- Inadequacy of Current Diagnostic Codes
- Proposed Modifications and Clarification
- Discussion

Sepsis: Defining a Disease Continuum



Sepsis: Defining a Disease Continuum

Infection/
Trauma

SIRS

Sepsis

Severe Sepsis

Sepsis with ≥ 1 sign of organ failure

Cardiovascular (refractory hypotension)

Renal

Respiratory

Hepatic

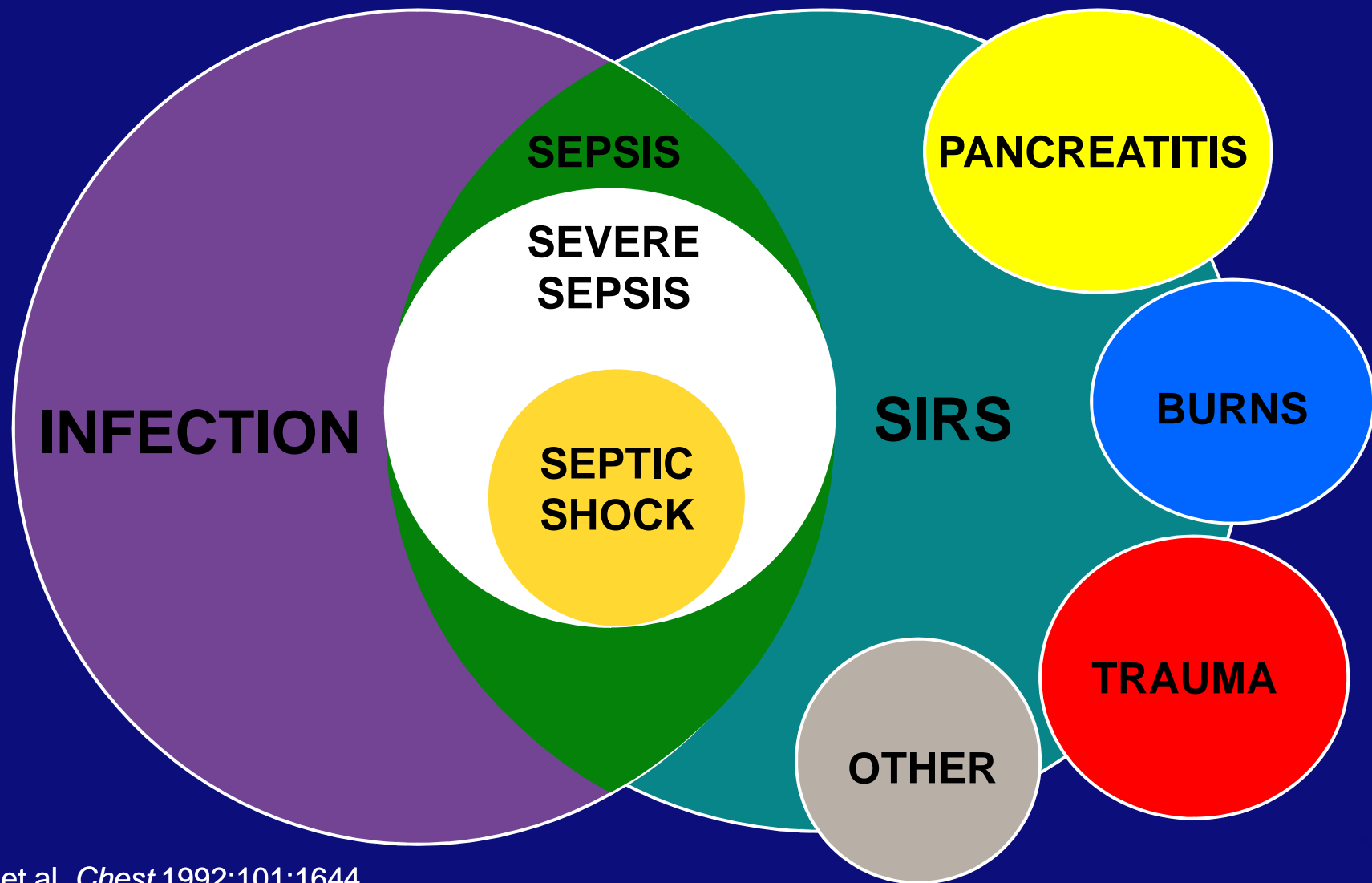
Hematologic

CNS

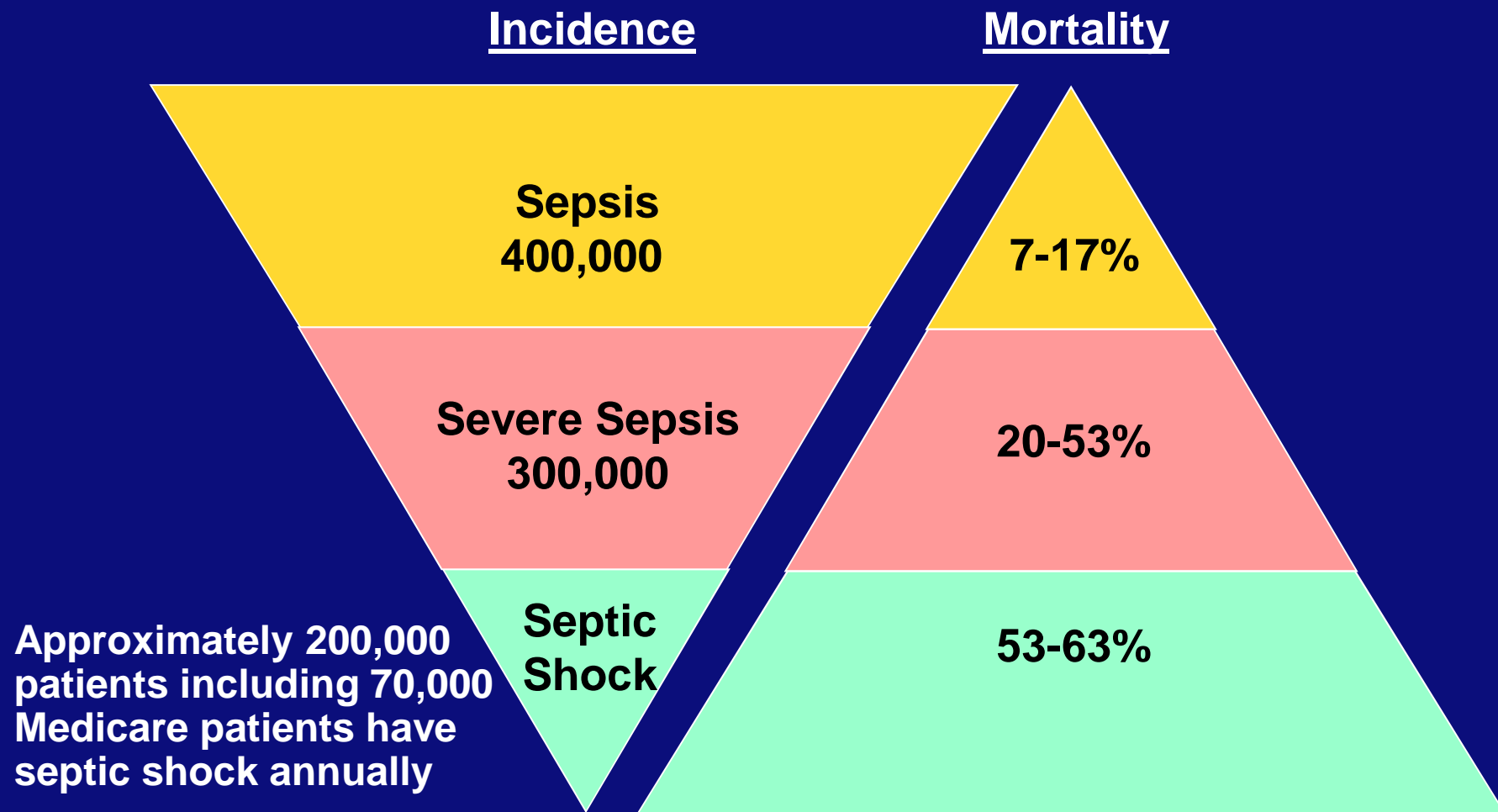
Metabolic acidosis

Shock

Relationship Of Infection, SIRS, Sepsis Severe Sepsis and Septic Shock



Mortality Increases in Septic Shock Patients



Definitions & Current Convention

- **Sepsis** (currently included in 038.x)
Systemic inflammatory response to known or suspected infection
- **Severe Sepsis** (995.92 + 038.x)
SIRS associated with organ dysfunction (failure), hypoperfusion, and perfusion abnormalities

Definitions Continued

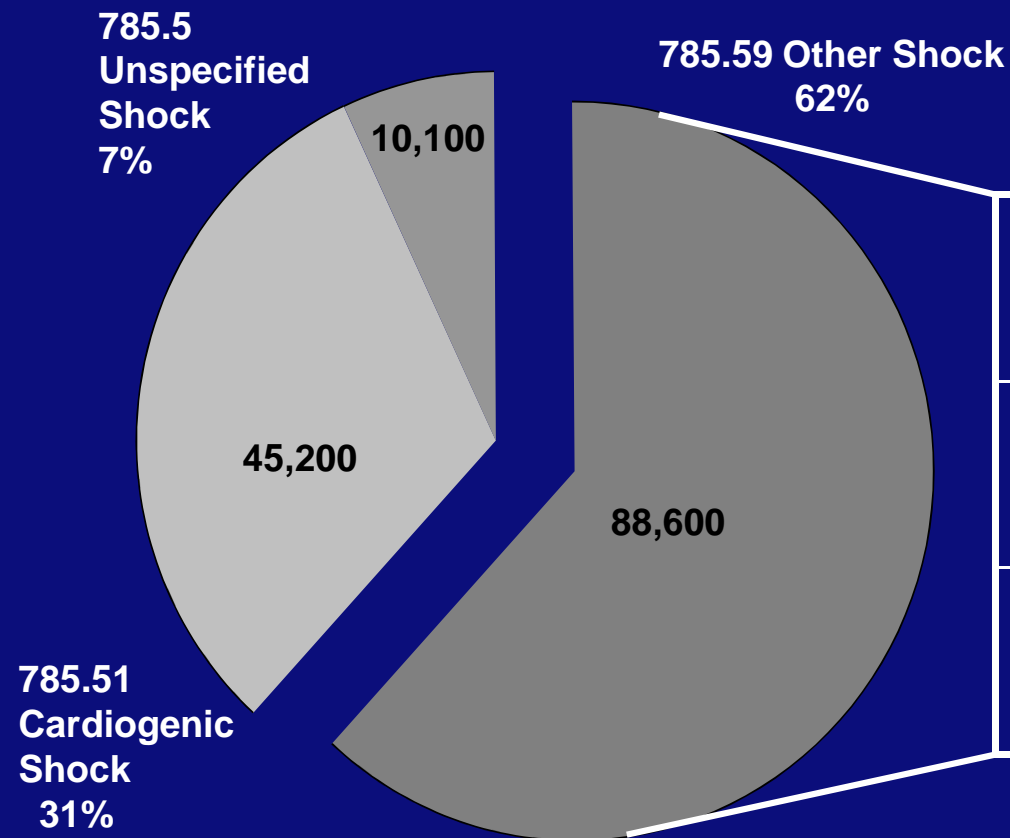
- **Septic shock** (currently included in 785.59)

A subset of severe sepsis, where patients experience **combined decreased systemic vascular resistance and the presence of reduced myocardial performance**

Inadequacy of Existing Codes

- Septic shock is bundled with non-related diagnoses for non-traumatic shock in 785.59 including:
 - Extracardiac obstructive shock
 - Pericardial tamponade
 - Constrictive pericarditis
 - Pulmonary embolism
 - Oligemic shock
 - Dehydration
 - Hemorrhage

Septic Shock is Unique within 785.59



785.59 Details

	Population	Mortality	Length Of Stay	Cost
With infection *	70,900	51%	17.1	\$30,300
Without infection	17,700	52%	8.9	\$17,400

* Represents Septic Shock Patients

ICD-9-CM code 785.5X Population

Septic Shock patients have a longer length of stay and a higher cost than other patients within 785.59

Modification to Septic Shock Coding

- Create unique code to identify septic shock
785.52, septic shock
- Use additional code (995.92) to identify severe sepsis
- Remove term “septic” from 785.59, *other shock without mention of trauma* & 998.0, *postoperative shock*
- Add “excludes septic shock (785.52)” from 998.0, *postoperative shock*
- Add notation to 995.92 to code also “septic shock” (785.52)

Modification to SIRS Codes

- Sepsis should be indexed to 995.91, as it is defined as SIRS due to infection without organ failure
 - Code also 038.x
- 995.92 should include link to the new Septic Shock code, as Septic Shock is a subset of Severe Sepsis
 - Modification will ensure adoption and proper use
 - Without these modifications, valuable data on mortality, morbidity, and utilization will be lost

Modification on SIRS Codes (Cont.)

- Include the following organ dysfunction examples under 995.92
 - Respiratory failure (518.81)
 - Acute renal failure (584)
 - Hepatic failure (573.9)
 - Septic shock (785.52)
- Delete heart failure under 995.92, as this is related to Septic Shock (785.52)

Conclusion

- Septic shock has distinct characteristics that support the creation of a unique code (785.52)
- Septic shock should be linked to severe sepsis
- Modification of current SIRS coding will better represent the clinical presentation of the sepsis syndrome
 - 995.51, *sepsis*
 - Modification to “code also” list in 995.92



Deficiencies of 1991 Consensus Conference

- Limitations inherent in these definitions:
 - Incomplete agreement as to what defines “Systemic Response”
 - Inflammation only?
 - Organ/System failures not defined
 - Except hypotension (SBP <90 mmHg or >40 mmHg decline from baseline; need for vasopressor support)

"Dear SIRS, I do not like you"

Jean Louis Vincent

2001 Sepsis Definitions Conference

- Current definitions will remain unchanged
- However, will accept the uncertainty of definitions
- SIRS expanded to signs and symptoms
 - Chills
 - Alteration in temperature
 - Tachypnea
 - Change in mental status
 - Tachycardia
 - Altered WBC, Bandemia
 - Thrombocytopenia
 - Decreased perfusion: mottling, poor capillary refill
 - Increased blood sugar
 - Petichiae/Purpura

2001 Sepsis Definitions Conference

- **PIRO** staging system proposed
 - **P**redisposition: Genetics, Chronic illness
 - **I**nsult: Infection, Injury, Ischemia
 - **R**esponse: Physiologic, Mediators, Markers
 - **O**rgan Dysfunction: Outcome, Organ dysfunction